



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,472	06/13/2001	Kevin T. O'Dougherty	N95.12-0013	5213

25559 7590 08/18/2003

ATMI, INC.  
7 COMMERCE DRIVE  
DANBURY, CT 06810

EXAMINER

SHAPIRO, JEFFERY A

ART UNIT	PAPER NUMBER
----------	--------------

3653

DATE MAILED: 08/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant No.

09/880,472

Applicant(s)

O'DOUGHERTY ET AL.

Examiner

Jeffrey A. Shapiro

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zugibe in view of McCarrick et al (US 5,953,682). Zugibe et al discloses the following.

As described in Claims 1, 11, 16, 20, 21, 25 and 30;

1. a container (2 or 16);
2. storage means (30 and 32), coupled with the container, for storing information relating to the liquid;
3. *a connector having* communication means for obtaining information from the storage means (see figure 2, noting network interface (35) as well as connections throughout the system to control (30) and computer (32));
4. *the connector further having* controller means(30 and 32), coupled with the communication means, for controlling processing of the liquid based on information, the obtaining to occur when the interior is accessible to said controller means;

As described in Claims 2, 21 and 26;

5. the controller means comprises a user-interface (32) (note that the computer is considered to have a keyboard and display for user interface) capable of receiving input from the user;

As described in Claims 3 and 22;

Art Unit: 3653

6. the controller means further controls processing the liquid based on input received by the user-interface from the user (see col. 15, lines 10-17);

As described in Claims 4 and 23;

7. the controller means further controls processing the liquid by comparing the input received by the user-interface from the user to information read from the storage means to determine whether the liquid in the container should be dispensed to a process (see col. 18, lines 37-60)

As described in Claim 12;

8. a connector head (4 or 22)
9. a probe (3 or 17) extending from the connector head and insertable through a center of the cap and into the opening;
10. the probe having a flow passage therein (see col. 12, lines 66 and 67 );

As described in Claim 13;

11. a pump (40) is coupled with the probe and with the flow passage;

As described in Claims 6, 11 and 17;

12. a cap (4) for coupling with the container such that the liquid is sealed in the container (Note that the valves (4) and (14) and have SAE fittings-see col. 12, lines 60-62);

Art Unit: 3653

13. a connector (note that it is clear from the figures and the descriptions of elements (3 and 4), that they are coupled such that they form a seal on the top of containers (1 and 15), for example) for coupling with the cap such that the liquid can be dispensed from the container through the connector;

Zugibe does not expressly disclose the following.

As described in Claims 5, 24 and 27;

14. the user-interface comprises a touch screen capable of receiving input from the user and displaying information about the liquid contained in the container;

As described in Claims 7 and 8;

15. the storage means is mounted on the cap and the communication means is mounted on the connector;

As described in Claims 9, 11, 17, 20 and 25;

16. the communication means is a radio frequency (RF) antenna and the storage means is a passive radio frequency identification (RFID) tag;

As described in Claims 10, 11, 14, 18 and 28;

17. the RFID tag comprises a passive RF transponder and an electrically erasable programmable read-only memory (EEPROM);

As described in Claims 15, 19 and 29;

18. the EEPROM stores information about the liquid contained in the container;

Art Unit: 3653

McCarrick et al (US 5,953,682) discloses the following.

As described in Claims 5, 24 and 27;

14. the user-interface comprises a touch screen capable of receiving input from the user and displaying information about the liquid contained in the container (note that a touch screen is considered to be a functional equivalent of the computer screen of Zugibe—see, for example, Bathe et al, col. 6, lines 30-33 or Kar et al, col. 7, lines 43-45;

As described in Claims 7 and 8;

15. the storage means (323) is mounted on the cap and the communication means is mounted on the connector; (Note that mounting the storage means in the cap or in the connector, and vice-versa with the communication means, are considered to be functional equivalents to each other.)

As described in Claims 9, 11, 17, 20, 25 and 31;

16. the communication means is a radio frequency (RF) antenna and the storage means is a passive radio frequency identification (RFID) tag; (Note that an RF antenna and RFID tag is considered to be a functional equivalent of both the communication means of McCarrick et al and of Zugibe. See Rosch et al, for example.)

As described in Claims 10, 11, 14, 18 and 28;

17. the RFID tag comprises a passive RF transponder and an electrically erasable programmable read-only memory (EEPROM);  
(Again, this is considered to be functional equivalent of the communication means of McCarrick et al and of Zugibe. See Rosch et al, for example.)

As described in Claims 15, 19 and 29;

18. the EEPROM stores information about the liquid contained in the container (see abstract of McCarrick et al, for example);

Both Zugibe and McCarrick et al are analogous art since they both concern computer controlled gas tracking and release systems.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the gas tracking and release system of McCarrick et al.

The suggestion/motivation would have been to provide a wide variety of data on the gas to the release system, such data including inventory data. See abstract of McCarrick et al, for example.

Therefore, it would have been obvious to obtain the invention as specified in Claims 1-31.

3. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leatherman (US 6,571,151) Leatherman discloses the following.

As described in Claims 1, 11, 16, 20, 21, 25 and 30;

1. a container (22);

Art Unit: 3653

2. storage means (94), coupled with the container, for storing information relating to the liquid;
3. *a connector (12, 14, 16, 20, 30 and 40) having communication means (46) for obtaining information from the storage means (74));*
4. *the connector further having controller means (42 and 44), coupled with the communication means (46), for controlling processing of the liquid based on information, the obtaining to occur when the interior is accessible to said controller means;*

(Note that the spout (12), nozzle (14), hose (16 and 20), piping (30) and valve (40) appear to be connected. A cap is defined in Merriam-Webster's Collegiate Dictionary, 12<sup>th</sup> ed., p. 168, as "something that serves as a cover or protection..." and as "a fitting for closing the end of a tube..." In this situation, the valve and tubing assembly can be construed as a connector, since the valve and piping work to "cover or protect" the contents of the tank from escaping. Such contents include the gasoline, but also include the vapor, which is returned to the tank. Applicant's use of the limitation "cap" appears to be broad enough to invite such interpretation.)

As described in Claims 2, 21 and 26;

5. the controller means comprises a user-interface (56, 58 or 120)  
(note that the computer is considered to have a keyboard and display for user interface) capable of receiving input from the user;

As described in Claims 3 and 22;



6. the controller means further controls processing the liquid based on input received by the user-interface from the user (note that the user chooses which octane, which causes the dispenser to mix the fuel to the correct octane, as is well-known in the art);

As described in Claims 4 and 23;

7. the controller means further controls processing the liquid by comparing the input received by the user-interface from the user to information read from the storage means to determine whether the liquid in the container should be dispensed to a process (note that the mixture process requires comparison of fuel levels as well as fuel contents—see figure 9, noting steps which “gather information from components”);

As described in Claim 12;

8. a connector head (note that the top of the dispenser can be construed as a connector head)

9. a probe (112) extending from the connector head and insertable through a center of the cap and into the opening; (Note that the octane sensor, as shown in figure 5, is placed in the path of the gasoline to detect the octane at the nozzle end. It would also be obvious to those ordinarily skilled in the art to have an octane sensor in the tank to detect the octane of the contents of each tank, so that they can be mixed adequately.)

10. the probe having a flow passage therein; (Note also that the nozzle (12) can be construed to have the same structure as Applicant's probe,

the nozzle being the flow passage, the sensor (112) being the sensor or probe. Note also that it would be obvious to have this structure on the intake hose leading from the tank so as to sense the octane at the tank end, before mixing. See also Terranova et al (US 6,065,638), elements (102 and 202.)

As described in Claim 13;

11. a pump (36) is coupled with the probe and with the flow passage;

As described in Claims 6, 11 and 17;

12. a cap (12, 14, 16, 20, 30 and 40)) for coupling with the container such that the liquid is sealed in the container;

13. a connector (note that it is clear from the figures and the descriptions of elements, that they are coupled such that they form a seal on the top of container (22), for example) for coupling with the cap such that the liquid can be dispensed from the container through the connector;

Leatherman further discloses the following.

As described in Claims 5, 24 and 27;

14. the user-interface comprises a touch screen capable of receiving input from the user and displaying information about the liquid contained in the container (note that a touch screen is considered to be a functional equivalent of the computer screen of Leatherman—see, for example, Bathe et al, col. 6, lines 30-33 or Kar et al, col. 7, lines 43-45;

As described in Claims 7 and 8;

15. the storage means (94) is mounted on the cap and the communication means is mounted on the connector; (Note that mounting the storage means in the cap or in the connector, and vice-versa with the communication means, are considered to be functional equivalents to each other.)

As described in Claims 9, 11, 17, 20, 25 and 31;

16. the communication means is a radio frequency (RF) antenna and the storage means is a passive radio frequency identification (RFID) tag; (See col. 3, lines 12-21, col. 6, lines 39-47 and col. 7, lines 34-40.)

As described in Claims 10, 11, 14, 18 and 28;

17. the RFID tag comprises a passive RF transponder and an electrically erasable programmable read-only memory (EEPROM); (See col. 3, lines 12-21, col. 6, lines 39-47 and col. 7, lines 34-40.)

As described in Claims 15, 19 and 29;

18. the EEPROM stores information about the liquid contained in the container (see figure 9, for example);

### ***Response to Arguments***

4. Applicant's arguments filed 5/30/03 have been fully considered but they are not persuasive. Applicant asserts that the combination of Zugibe over McCarrick et al because the storage and communication means are disassociated from both the controller means and the container. However, they are connected. This is definite from the figures and passages cited above. What is too far away? If one were to control the

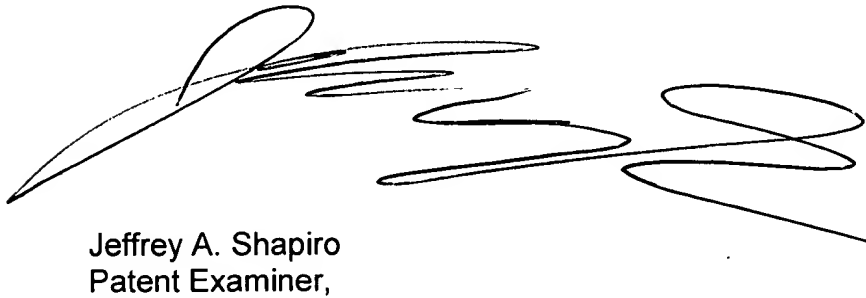
system by a controller located around the world and connected by satellite to the container, they would still be connected. It would be, at the very least, obvious for one ordinarily skilled in the art to combine all of the system into a package for portability, for example, or to be contained in a particular place. However, the fact still remains, that based upon the claim limitations, as currently written, and reasonably broadly construed, the structure of the combination of Zugibe and McCarrick et al still is substantially the same as Applicant's structure, performing substantially the same functions with substantially the same results. Leatherman, as described above, is another example of art which reads on Applicant's broad claim limitations. Applicant's Representative is encouraged to contact the Examiner in order to further the advancement of prosecution.

### ***Conclusion***

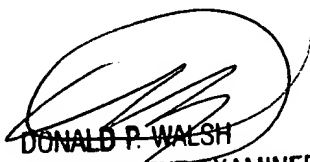
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shukla, Weiner, Azar et al, Gravel et al, Hoben et al, Hoyle et al, Neeser et al, Haneda (JP2002181296A) and Fuji (JP 2003139864A) are cited as examples of systems using RFID, wireless or other techniques for remote communication and control.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is (703)308-3423. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald P. Walsh can be reached on (703)306-4173. The fax phone numbers for the organization where this application or proceeding is assigned are (703)306-4195 for regular communications and (703)306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1113.



Jeffrey A. Shapiro  
Patent Examiner,  
Art Unit 3653



DONALD P. WALSH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

August 11, 2003